WHAT IS CLAIMED IS:

1. An exposure apparatus for printing, by exposure, a pattern of an original on a substrate, said apparatus comprising:

a housing tightly filled with a predetermined ambience and for accommodating therein at least a portion of an exposure light optical axis; and

a detection system having an optical system, wherein a portion of a light path of said detection system is disposed in a first space enclosed by said housing, and wherein at least another portion of said detection system including an electric element thereof is disposed in a second space outside said housing.

2. An apparatus according to Claim 1, wherein said housing is effective to tightly close one of (i) a space below a projection lens and accommodating the substrate therein and (ii) a space above the projection lens and accommodating the original therein.

3. An apparatus according to Claim 1, wherein said detection system is a detection system for executing focus adjustment of the substrate.

4. An apparatus according to Claim 3, wherein the electric element is one of a light source and a

CCD.

5. An apparatus according to Claim 1, wherein said detection system is a detection system for executing positional alignment between the original and the substrate.

6. An apparatus according to Claim 5, wherein the electric element is one of a light source and a CCD.

7. An apparatus according to Claim 1, wherein said detection system is a position measuring system for measuring a position of a stage for carrying thereon one of the original and the substrate.

8. An apparatus according to Claim 7, wherein the portion of the light path disposed in said first space extends by way of a mirror mounded on the stage and for reflecting measurement light.

9. An apparatus according to Claim 7, further comprising a laser interferometer disposed in said second space.

10. An apparatus according to Claim 1, further comprising a pressure reducing mechanism for applying

a vacuum to said first space.

11. An apparatus according to Claim 1, further comprising a window provided at an interface between said first and second spaces, for transmitting detection light of said detection system therethrough.

12. An apparatus according to Claim 1, wherein an oxygen concentration in said first space is maintained at not greater than 10 ppm.

13. An apparatus according to Claim 1, further comprising a gas introducing mechanism for introducing an inactive gas into said first space.

14. An apparatus according to Claim 1, wherein one of nitrogen and helium is introduced into said first space

15. An apparatus according to Claim 1, wherein said second space is purged.

16. An apparatus according to Claim 1, wherein light to be used for the exposure is laser light having a wavelength not greater than 248 nm.

17. An apparatus according to Claim 1, wherein

light to be used for the exposure is fluorine excimer laser light.

18. A device manufacturing method, comprising the steps of:

placing a group of production machines for various processes, including an exposure apparatus for printing, by exposure, a pattern of an original on a substrate, in a semiconductor manufacturing factory, wherein the exposure apparatus includes (i) a housing tightly filled with a predetermined ambience and for accommodating therein at least a portion of an exposure light optical axis, and (ii) a detection system having an optical system, wherein a portion of the detection system is disposed in a first space enclosed by the housing, and wherein another portion of the detection system is disposed in a second space outside the housing; and

manufacturing a semiconductor device through plural processes using the production machine group.

19. A method according to Claim 18, further comprising (i) connecting the production machine group through a local area network, and (ii) executing data communication about information related to at least one production machine of the production machine group between the local area network and an external network

outside the semiconductor manufacturing factory.

20. A method according to Claim 18, wherein a database provided by a production machine vendor or a user can be accessed through the external network so that information related to maintenance of the production machine can be obtained through data communication, and wherein production control can be made on the basis of data communication, through the external network, between the semiconductor manufacturing factory and a separate semiconductor manufacturing factory.

21. A semiconductor manufacturing factory, comprising:

a group of production machines for various processes, including an exposure apparatus for printing, by exposure, a pattern of an original on a substrate, wherein said exposure apparatus includes (i) a housing tightly filled with a predetermined ambience and for accommodating therein at least a portion of an exposure light optical axis, and (ii) a detection system having an optical system, wherein a portion of said detection system is disposed in a first space enclosed by the housing, and wherein another portion of said detection system is disposed in a second space outside the housing;

a local area network for connecting the production machine group; and

a gateway for enabling an access from the local area network to an external network outside the factory;

wherein information related to at least one production machine of the production machine group can be data communicated.

22. A method of executing maintenance for an exposure apparatus, provided in a semiconductor manufacturing factory and for printing, by exposure, a pattern of an original on a substrate, said method comprising the steps of:

preparing, by a vendor or a user of the exposure apparatus, a maintenance database connected to an external network outside the semiconductor manufacturing factory, wherein the exposure apparatus includes (i) a housing tightly filled with a predetermined ambience and for accommodating therein at least a portion of an exposure light optical axis, and (ii) a detection system having an optical system, wherein a portion of the detection system is disposed in a first space enclosed by the housing, and wherein another portion of said detection system is disposed in a second space outside the housing;

admitting an access from the semiconductor

manufacturing factory to the maintenance database through the external network; and

transmitting maintenance information stored in the maintenance database to the semiconductor manufacturing factory through the external network.

23. An exposure apparatus for printing, by exposure, a pattern of an original on a substrate, said apparatus comprising:

a housing tightly filled with a predetermined ambience and for accommodating therein at least a portion of an exposure light optical axis;

a detection system having an optical system, wherein a portion of the detection system is disposed in a first space enclosed by the housing, and wherein another portion of the detection system is disposed in a second space outside the housing; and

a display;

a network interface; and

a computer for executing a network software;

wherein maintenance information related to said exposure apparatus can be data communicated from the network interface and through a network, by use of said display and said computer.

24. An apparatus according to Claim 23, wherein the network software provides on the display a user

interface for accessing a maintenance database prepared by a vendor or a user of of said exposure apparatus and connected to an external network outside a factory where said exposure apparatus is placed, thereby to enable obtaining information from the database through the external network.

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